

## WHAT IS CLAIMED IS:

1. Disk array controller comprising:  
 a host switch interface section that is connected to a  
 host computer;

5 a plurality of respective disk array controlling units  
 that are provided with a channel interface section interfacing  
 with said host switch interface section, a disc interface section  
 that is connected to a magnetic disc unit and a cache memory  
 section that temporarily stores data as read out of or written  
 into said magnetic disc unit; and

a mutual connection network in connection with the channel  
 interface sections, the disc interface sections and the cache  
 memory sections of said disk array controlling units,

wherein said cache memory sections perform a transfer of  
 the data with the channel interface sections of said respective  
 disk array controlling units.

2. Disk array controller according to claim 1 wherein  
 said host switch interface section is provided with a management  
 table that selects a path of the data transfer according to an  
 address as requested by the host computer.

3. Disk array controller according to claim 2 wherein  
 said data transfer path is a path between said host switch  
 interface section and the channel interface sections of said  
 respective disk array controlling units.

4. Disk array controller according to claim 2 wherein

Sub A2

100716155-021902  
 20061210 09:44:00

said management table is provided with a path selection table  
 with candidates for the data transfer paths in response to said  
 address and a history information table in which the respective  
 data transfer paths are weighted according to a data volume  
 thereof, wherein the specific path is selected on the basis of  
 information of said history information table among the paths  
 as selected by said path selection table.

5. Disk array controller according to claim 1 wherein  
 one part of the respective disk array controlling units are  
 provided with higher-speed cache memory sections than those of  
 the other part thereof.

6. Disk array controller according to claim 2 wherein  
 said respective disk array controlling units are provided with  
 a resource management section that manages an operating ratio  
 of the resources thereof and reports said operating ratio through  
 an operating ratio report signal to said host switch interface  
 section, wherein said management table is provided with a path  
 selection table with candidates for the data transfer paths in  
 response to said address and a history information table in which  
 the respective data transfer paths are weighted based on said  
 operating ratio report signal, wherein the specific path is  
 selected based on information of said history table among the  
 paths as selected by said path selection table.

7. Disk array controller comprising:

a host switch interface section that is connected to a

host computer;

Sub A 2  
5 a plurality of respective disk array controlling units that are provided with a channel interface section interfacing with said host switch interface section, a disc interface section that is connected to a magnetic disc unit and a cache memory section that temporarily stores data as read out of or written into said magnetic disc unit;

10 a first connection network in connection with the channel interface sections, the disc interface sections and the cache memory sections of said respective disk array controlling units; and

15 a second mutual connection network in connection with said host interface section and the channel interface sections of said respective disk array controlling units,

wherein said cache memory sections perform a transfer of the data with the channel interface sections of said respective disk array controlling units.

20 8. Disk array controller according to claim 7 wherein said host switch interface section is provided with a management table to select a path of the data transfer according to an address as requested by the host computer..

25 9. Disk array controller according to claim 8 wherein said data transfer path is a path between said second mutual connection network and the channel interface sections of said respective disk array controlling units.

10. Disk array controller according to claim 8 wherein said management table is provided with a path selection table with candidates for the data transfer paths in response to said address and a history information table in which the respective data transfer paths are weighted according to a data volume thereof, wherein the specific path is selected according to information of said history table among the paths as selected by said path selection table.

11. Disk array controller according to claim 7 wherein one part of the disk array controlling units are provided with higher-speed cache memory sections than those of the other part thereof.

12. Disk array controller according to claim 8 wherein the respective disk array controlling units are provided with a resource management section that manages an operating ratio of the resources thereof and reports said operating ratio through an operating ratio report signal to said host switch interface section, wherein said management table is provided with a path selection table with candidates for the data transfer paths in response to said address and a history information table in which the respective data transfer paths are weighted according to said operating ratio report signal, wherein the specific path is selected according to information of said history table among the paths as selected by said path selection table.